



STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES &
ENVIRONMENTAL CONTROL
DIVISION OF WATER
89 KINGS HIGHWAY
DOVER, DELAWARE 19901

MEMORANDUM

TO: On-Site Licensee Professionals

FROM: Groundwater Discharges Section

DATE: January 27, 2014

SUBJECT: Revised Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems

Effective January 11th, 2014 the revised Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems (Regulations), became effective. The revisions satisfy the need for creating regulatory language to address inadequate regulation of our large on-site wastewater treatment and disposal systems. These large systems have daily flows greater than 2,500 gallons. The spray irrigation sections of the Guidance and Regulations Governing the Land Treatment of Wastes had not been updated or amended since 1999 and were in need of updating. As a result these sections are now incorporated into the Regulations. Future amendments to the land treatment regulations will remove these spray irrigation portions. The regulation also updates many portions of the small system design and permitting process. It revised many existing exhibits and created new ones. Guidelines are also attached for clarification of other aspects of the regulation language. The purpose of the guidelines is to ensure understanding of the Departments intent.

The Department engaged hundreds of stakeholders, licensees and on-site industry professionals in the amendment process to bring these regulations into congruence with current practices. A Regulatory Advisory Committee (RAC) made up of industry representatives and regulated groups met for more than fifty hours to discuss the proposed revisions and concepts to the regulations. In addition, eight subcommittees made up of RAC members, interested parties, and staff met a combined total of 50 times for over 150 hours. Over 400 individuals make up the interested parties list; these individuals requested inclusion on a list to be apprised of the regulation revisions throughout the process. In addition, those interested parties have provided numerous comments on drafts of the regulation during the 3 public hearings, 13 public workshops, 3 Delaware On-Site Wastewater Recycling Association (DOWRA) presentations and many informal meetings to support the revised regulations. Each comment, whether written or verbal, was given consideration in the development of regulatory language and guidance documents.

Delaware's good nature depends on you!

You will find key changes made to the revised On-Site Regulations near the end of this letter. This is not an all-inclusive list as there were many minor changes, significant re-arrangement and reformatting throughout the document. I have included a link to the revised On-Site Regulations for printing or review on-line. Hard copies will be available in our Dover and Georgetown offices by the week of February 10th for \$6.50 per copy. The On-Site Regulations consist of the regulatory document, exhibits and guidelines. These are all combined in one PDF format file on the DNREC website. The link is below:



http://www.dnrec.delaware.gov/wr/Information/GWDInfo/Documents/DelawareFinalOnSiteRegulations_01112014.pdf

If you have any comment with respect to the revisions to the Regulations, please provide them to me at the address shown below. The Department would like to thank all who commented and assisted with the culmination of five years' worth of effort to complete this revision as well as your patience and support.

DNREC Division of Water
Groundwater Discharges Section
89 Kings Highway
Dover, DE 19901

Additionally, please find below some helpful thoughts to assist through this transition period implementing the revised regulation changes.

In an effort to standardize the determination of and reduce the confusion in finding the Hydrologic Unit Code (HUC) the Department has created a set of instructions for obtaining the 12 digit HUC using Delaware Environmental Navigator.

1. Go to the Environmental Navigator website at: <http://maps.dnrec.delaware.gov/navmap/>
2. Click on the "Search for parcel" (at the upper left corner). As an example, we will use parcel WD00-081.00-01-60.00.
3. Enter parcel number per instructions. Click the "Search for parcel" button. Parcel number will show up.
4. Right click on parcel Kent (1) to get the context menu. Click on "zoom to selected features".
5. The parcel will appear. To the upper right of the screen will see the  map identification. Click on the  and then click on the annotated parcel.
6. The watershed will be displayed along with a drop down menu (Upper Choptank). Click the drop down arrow and scroll down to HUC_12. The HUC for this parcel is 020600050101.

In addition this site will provide the 2007 SWMP and V zone (FEMA Flood Maps) information.

<http://www.dnrec.delaware.gov/Admin/DelawareWetlands/Pages/Wetlands-Maps.aspx>

There were 3 minor corrections made to the exhibits if you have already printed them out. They are listed here:

1. Exhibit C, Sheet 2 of 2, note (e) was missing the word "two" after forty in the second sentence which should read as "The well must be cased to a depth of forty two (42) feet, exclusive of the screen, ..."
2. Exhibit H - the distribution box should have shown the riser extending above grade. It is corrected now.
3. Exhibit X - The "OSI effluent pump" has been corrected to read "effluent pump".

The Environmental Training Center at Delaware Tech in Georgetown will be offering a course titled "On-Site Regulations Revision Review" on three separate dates beginning in February. The course will review major changes that have been adopted into the Regulations, how these changes impact the onsite community and implementation time frames.

The dates are Feb. 27th from 8:30-12:00, March 4th from 5:30-9:00 pm and March 8th from 8:30-12:00. Contact Hilary Valentine for registration information at 302-259-6384 or hvalent2@dtcc.edu.



List of Key Changes to the On-Site Regulations

1. First and foremost, we changed the entire order of the regulation, better flow (follows the permitting process from soils work to operation and maintenance of systems for both small and large systems) and brought in the spray irrigation guidelines and regulations so spray irrigation became a large system (also standardized the large system permitting process for on-site systems and spray irrigation).
2. **Definitions** - We added many definitions to help everyone comprehend the meaning of our terminology and provide clarification.
3. **Section 3—General Standards, Prohibitions and Provisions**
 - Established electrical and OSHA requirements
 - Chesapeake Bay Watershed tidal waters nutrient reduction requirements for nitrogen and phosphorus within 1,000 feet of these tidal waters
 - Elimination of all cesspools and seepage pits, Class H system inspection required at sale of a home with a Class F pump out of the septic tank
 - All advanced treatment units will be required to meet PSN3 treatment levels
 - Homeowners responsibilities were added; ensure system components remain above grade, maintain systems in accordance with these regulations and only hire DNREC licensed Class E system contractors to repair/replace any component of the system
4. **Section 4—Licenses**
 - Established new Class I construction inspector licensee; will inspect all new system installations, repairs and replacement system installation.
 - Class C designers are now required to pass an examination for licensing
 - Created tiered license's for Class D soil scientists and Class E system contractors
 - Class H system inspectors must pass an examination for licensing and have first 3 inspections supervised by the Department
 - Incorporated Class F waste hauler guidelines into regulations
 - Added a Class I construction inspector representative to the On-Site System Advisory Board
 - Created term limits for all members of the On-Site System Advisory Board of 3 years
5. **Section 5 – Small Systems (>2500 gpd)**
 - Added Wisconsin At-Grade systems to the list of conventional systems and all associated design considerations

- Clarified conditions for the non-expiration of a site evaluation
- Require all septic tanks, dosing chambers, holding tanks and grease traps to be certified through the On-Site Wastewater Accreditation Program
- Added new language for the use of lift stations
- Added Class F waste hauler transportation requirements and responsibilities
- Created new inspection protocols section for Class E system contractors and Class H system inspectors
- Allow homeowners to maintain their own innovative/alternative system once certified through the homeowner training program
- Eliminated variances and replaced with a waiver process for extenuating circumstances when the requirements of the regulations cannot be met

6. Section 6 – Large Systems (>2500 gpd)

- Created a new section for large systems as these systems were not addressed very thoroughly in previous versions of the on-site regulation so everything is new.
- Incorporated large system guidelines that includes; the soil investigation report (SIR), hydrogeologic suitability report (HSR) and the surface water assessment report (SWAR). These 3 reports make up the holistic site investigation approach necessary for determining the siting, design characteristics and potential impact of the system on the site. This is a very comprehensive site characterization.
- Standardized the permitting process for on-site systems and spray irrigation systems. Most design considerations unified but some system specific considerations are separated out.
- Added requirements for the use of lysimeters to determine nutrient loadings
- Updated the legal requirements for utilities operating large systems plus combined with the Public Service Commission for financial oversight of system operation
- Added compliance monitoring report (CMR) requirement which is a comprehensive assessment of the soils, hydrology, operation and maintenance, monitoring and performance level of the large system over a five year period. It is a compilation of the annual reports currently being generated with an emphasis on any trends or poor performance.
- Created regional large system requirements including design considerations, required documentation, phasing, and construction requirements.
- Added many new operation and maintenance requirements

- Standardized monitoring requirements to include; groundwater, influent and effluent, soils, and lysimeter. Also reporting requirements and the annual report.
- Established requirements for temporary large system and regional holding tank procedures
- Created procedures for the distribution of treated wastewater for agricultural use and other authorized purposes

7. Exhibits

- Added 14 new exhibits
 - System Abandonment Report
 - Peat System Design Loading Rates
 - Micro-Irrigation "Drip" Design Loading Rates
 - Micro-irrigation "Drip" Dispersal Installation Methods
 - Innovative/Alternative Product Approval Checklist
 - Lot Clearing/Disturbed Site Inspection Report
 - Crop Nutrient Uptake Websites
 - Cumulative Metal Loading Limit for Spray Irrigation Systems
 - Monthly Average Daylight Hours for Thornthwaite Potential Evapotranspiration
 - Climatological Normal Temperature (Ta) & Thornthwaite Potential Evapotranspiration
 - Climatological Normal Precipitation (P) & 5 Year Return Monthly Precipitation (P5)
 - Minimum Treatment Requirements for Large Systems
 - On-Site Wastewater Treatment and Disposal System Performance Standards
 - Chesapeake Bay 1,000 Foot Enforcement Zone

8. Items with "phased in" effective dates:

- All new design criteria shall become effective March 1, 2014.
- One year implementation timeline for concrete plants to get OWAP certification
- One year implementation timeline for performance standards state-wide (I/A systems)
- One year implementation timeline for performance standards required in the CBWIP areas
- One year implementation timeline for replacement of cesspools/seepage pits once found during Class H System Inspector inspection.
- One year implementation timeline for reporting pump-outs performed by Class F Non-Hazardous Liquid Waste Haulers
- Two year implementation timeline for New Class I Construction Inspector

9. Further explanation of the “phased in” dates:

- Class I Inspections begin January 11, 2016. The Department will continue performing all gravity inspections and cap inspections until this date.
- Class C designers will perform all pre-cover inspections on engineered systems. The Department will continue to perform final cap inspections until January 11, 2016 at which time the Engineers will begin performing all the inspections on engineered systems.
- The Class C designer is required to submit system inspection reports within 72 hours from the date of the inspection. This excludes weekends and holidays when state offices are closed. If the Engineer contacts the Department within the 72 hours of the inspection to indicate that a report cannot be submitted within the time frame, the Department may grant reasonable time to complete the reports. The Department will accept reports dated and mailed within the 72 hour timeframe but not received until after the 72 hour allotted time frame.
- For engineered designs that have been contracted for and paid for but for whatever reasons were not submitted to the Department prior to January 11, 2014 can be submitted as designed until March 1, 2014. This should provide adequate time to contact clients and inform them they have until March 1, 2014 to submit the applications. This should also provide adequate time to contact clients that were provided a bid for potential design work but have not contracted the work yet.

